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Electronic Supplementary Information for

Unraveling the Influence of Substrate Surface and Temperature on Microstructural Evolution of Crystalline MoS_2 in Atomic Layer Deposition

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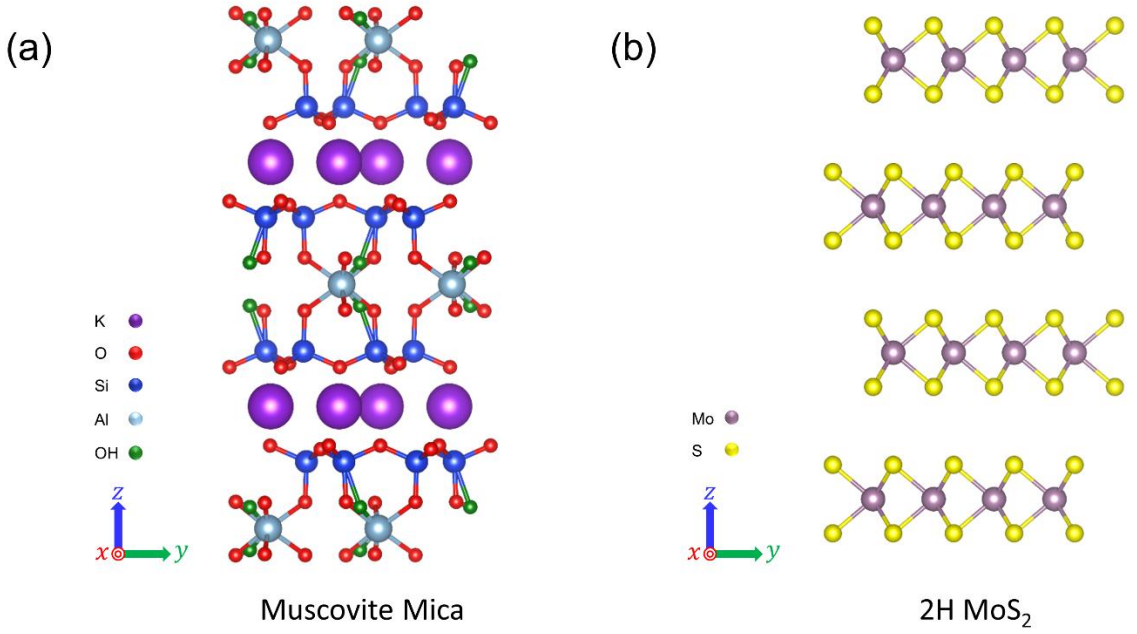

Figure S1. Schematics of (a) mica and (b) MoS_2 structures.

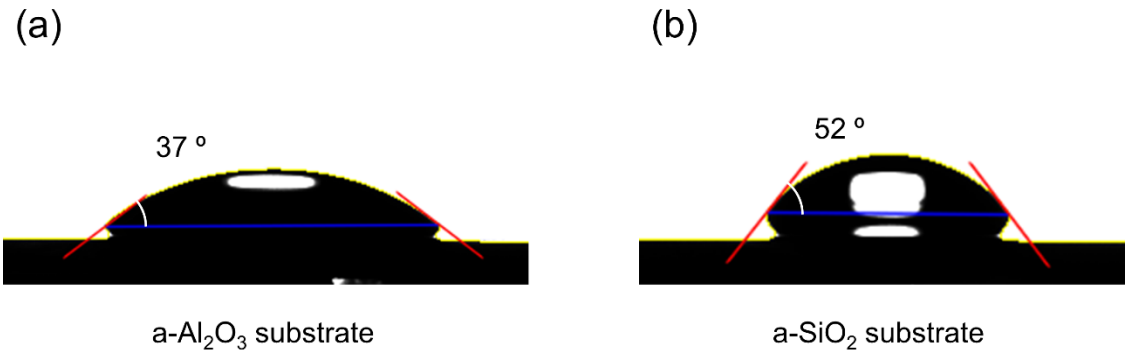

Figure S2. Contact angle measurements of (a) the ALD-grown Al_2O_3 and (b) SiO_2 substrates

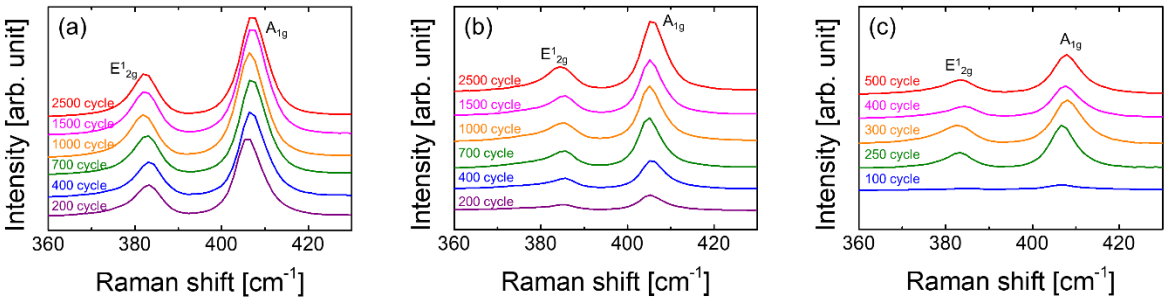

Figure S3. Raman spectra of MoS_2 grown on (a) Al_2O_3, (b) SiO_2, and (c) mica at 650 °C

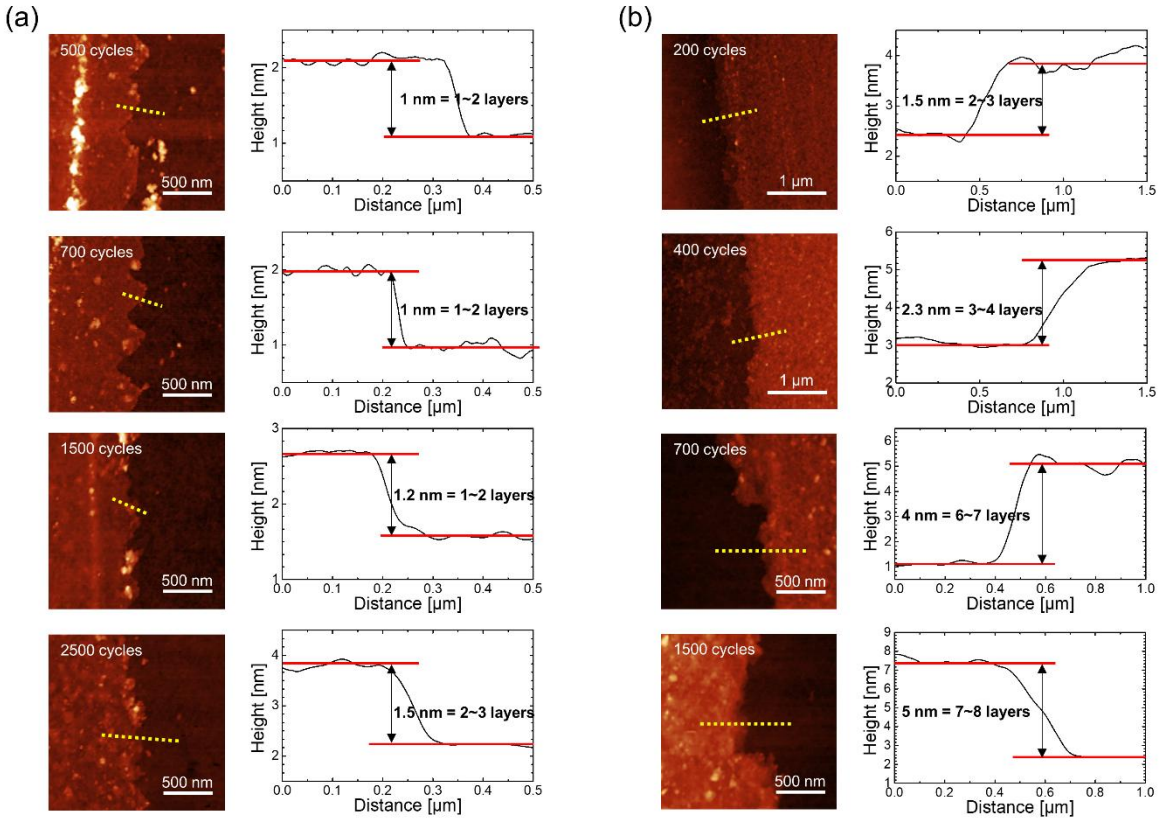

Figure S4. AFM images and height profiles of the MoS_2 grown on (a) SiO_2 and (b) Al_2O_3 at 650 °C

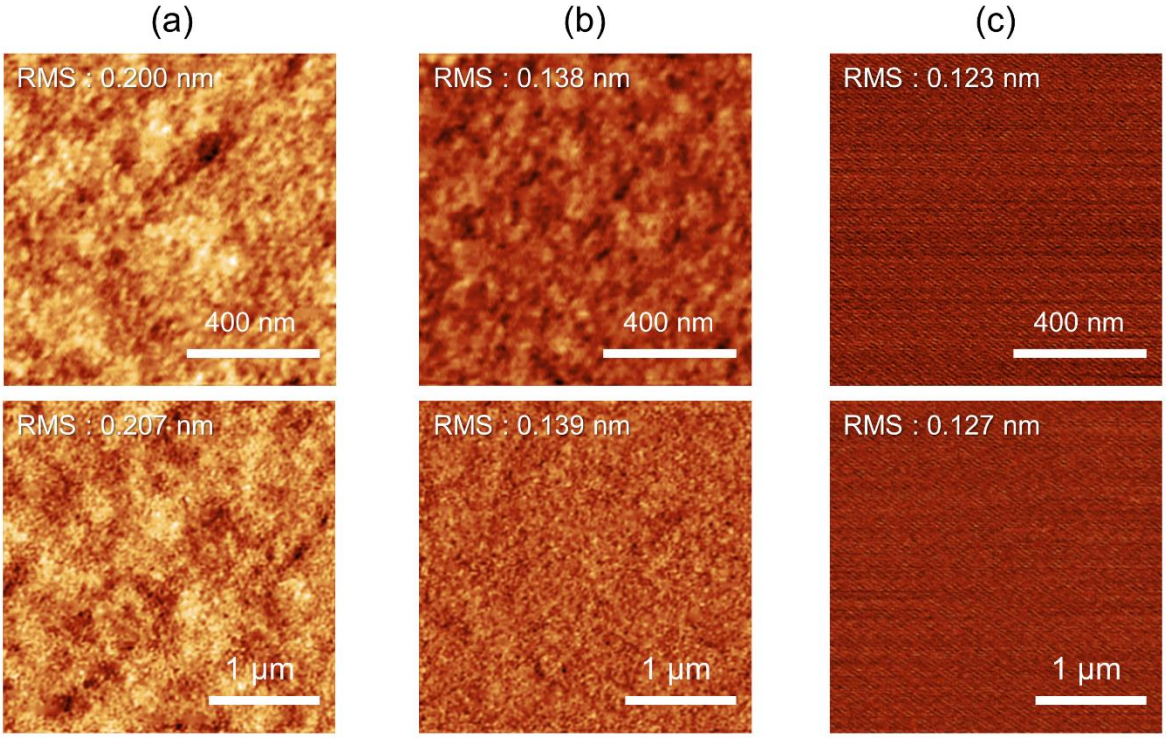

Figure S5. AFM images of (a) SiO_2, (b) Al_2O_3, and (c) mica substrates.

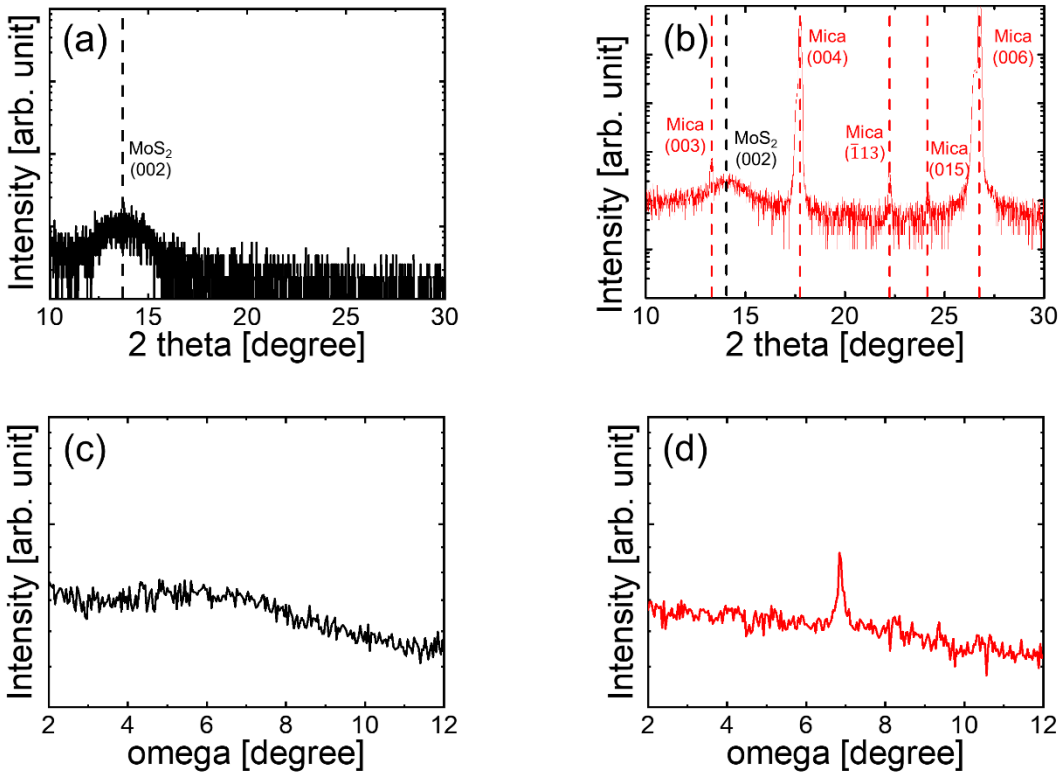

Figure S6. Θ-2Θ theta XRD patterns of the MoS_2 grown on (a) the ALD-grown Al_2O_3 and (b) the mica. Rocking curves of the MoS_2 grown on (c) the ALD-grown Al_2O_3 and (d) the mica.

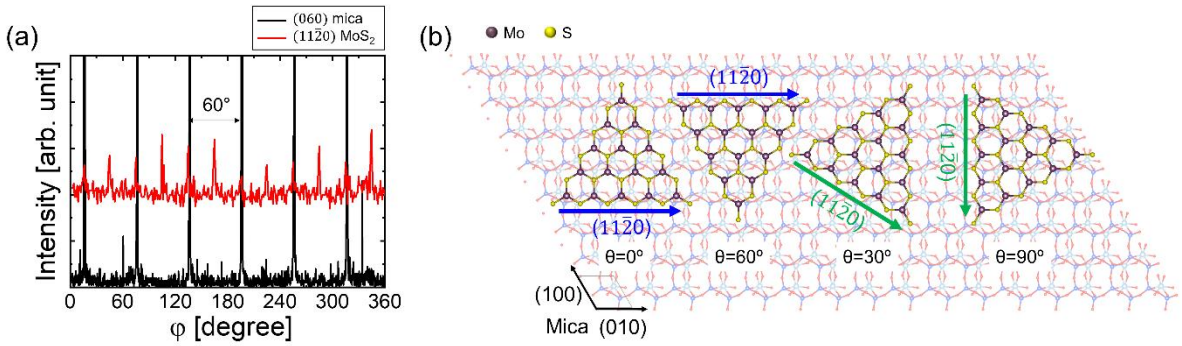

Figure S7. In-plane φ-scans of the (060) mica and (11$\bar{2}$0) MoS_2 reflections. (b) Schematic of possible coincidence site lattices for MoS_2 domains on mica.